

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

Listing of Claims:

1. (Currently Amended) A method for transferring data from at least one local data storage device to at least one remote data storage device, comprising:

subdividing the data into portions;

assigning a sequence number to each of the portions, wherein there is a first set of writes to the at least one local storage device for a first set of portions having a first sequence number and the first set of writes is ~~are~~-begin before a second set of writes for a second set of portions having a second sequence number that is assigned after to the first sequence number; and

updating the sequence number in response to a particular sequence number having been used before and ~~there being data~~ in response to data being available to send from the at least one local storage device to the at least one remote storage device.

2. (Currently Amended) A method, according to claim 1, wherein the at least one local storage device ~~includes a plurality of storage entities~~ is part of a group of storage devices that form a consistency group.

3. (Currently Amended) A method, according to claim 2, further comprising:

passing a shuttle between the ~~entities of the~~ group of storage devices that form the consistency group; and

using the shuttle to determine if a particular sequence number has been used before.

4. (Currently Amended) A method, according to claim 3, wherein updating the sequence number includes a particular one of the ~~entities~~ storage devices of the consistency group using the shuttle to determine if the particular one of the ~~entities~~ storage devices has used the particular sequence number before and, if so, the particular one of the ~~entities~~ storage devices updating the sequence number in response to the particular one of the ~~entities~~ storage devices having data to be sent to the at least one remote storage device.

5. (Original) A method, according to claim 1, further comprising:

maintaining a running total of an amount of data associated with each of the sequence numbers.

6. (Currently Amended) A method, according to claim 5, wherein the at least one local storage device ~~includes a plurality of storage entities~~ is part of a group of storage devices that form a consistency group.

7. (Currently Amended) A method, according to claim 6, further comprising:

passing a shuttle between the ~~entities~~ storage devices of the consistency group; and
using the shuttle for maintaining the running total of data associated with each of the
sequence numbers.

8. (Currently Amended) A method, according to claim 7, wherein updating the sequence number
includes a particular one of the ~~entities~~ storage devices of the consistency group using the shuttle
to determine if the particular one of the ~~entities~~ storage devices has used the particular sequence
number before and, if so, the particular one of the ~~entities~~ storage devices updating the sequence
number in response to the particular one of the ~~entities~~ storage devices having data to be sent to
the at least one remote storage device.

9. (Original) A method, according to claim 8, further comprising:

following updating the sequence number, transferring data having a previous sequence
number from the at least one local storage device to the at least one remote storage device.

10. (Original) A method, according to claim 9, further comprising:

prior to transferring data, buffering the data in an auxiliary storage area associated with
the at least one local storage device.

11. (Currently Amended) A computer program product, provided in a computer-readable storage medium, that transfers data from at least one local data storage device to at least one remote data storage device, comprising:

executable code, provided in the computer-readable storage medium, that maintains the data subdivided into portions;

executable code, provided in the computer-readable storage medium, that assigns a sequence number to each of the portions, wherein there is a first set of writes to the at least one local storage device for a first set of portions having a first sequence number and the first set of writes is ~~are~~ begun before a second set of writes for a second set of portions having a second sequence number that is assigned after to the first sequence number; and

executable code, provided in the computer-readable storage medium, that updates the sequence number in response to a particular sequence number having been used before and ~~there being data~~ in response to data being available to send from the at least one local storage device to the at least one remote storage device.

12. (Currently Amended) A computer program product, according to claim 11, wherein the at least one local storage device ~~includes a plurality of storage entities~~ is part of a group of storage devices that form a consistency group.

13. (Currently Amended) A computer program product, according to claim 12, further comprising:

executable code, provided in the computer-readable storage medium, that passes a shuttle between the ~~entities~~ storage devices of the consistency group; and

executable code, provided in the computer-readable storage medium, that uses the shuttle to determine if a particular sequence number has been used before.

14. (Currently Amended) A computer program product, according to claim 13, wherein executable code that updates the sequence number includes executable code that causes a particular one of the ~~entities~~ storage devices of the consistency group using the shuttle to determine if the particular one of the ~~entities~~ storage devices has used the particular sequence number before and, if so, causes the particular one of the ~~entities~~ storage devices to update the sequence number in response to the particular one of the ~~entities~~ storage devices having data to be sent to the at least one remote storage device.

15. (Currently Amended) A computer program product, according to claim 11, further comprising:

executable code, provided in the computer-readable storage medium, that maintains a running total of an amount of data associated with each of the sequence numbers.

16. (Currently Amended) A computer program product, according to claim 15, wherein the at least one local storage device ~~includes a plurality of storage entities~~ is part of a group of storage devices that form a consistency group.

17. (Currently Amended) A computer program product, according to claim 16, further comprising:

executable code, provided in the computer-readable storage medium, that passes a shuttle between the ~~entities~~ storage devices of the consistency group; and

executable code, provided in the computer-readable storage medium, that uses the shuttle for maintaining the running total of data associated with each of the sequence numbers.

18. (Currently Amended) A computer program product, according to claim 17, wherein executable code that updates the sequence number includes executable code that causes a particular one of the ~~entities~~ storage devices of the consistency group using the shuttle to determine if the particular one of the ~~entities~~ storage devices has used the particular sequence number before and, if so, causes the particular one of the ~~entities~~ storage devices updating the sequence number in response to the particular one of the ~~entities~~ storage devices having data to be sent to the at least one remote storage device.

19. (Currently Amended) A computer program product, according to claim 18, further comprising:

executable code, provided in the computer-readable storage medium, that transfers data having a previous sequence number from the at least one local storage device to the at least one remote storage device following updating the sequence number.

20. (Currently Amended) A computer program product, according to claim 19, further comprising:

executable code, provided in the computer-readable storage medium, that buffers the data in an auxiliary storage area associated with the at least one local storage device prior to transferring data.